

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/50908

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B01D53/14 B01D53/04 C10L3/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B01D C10L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 275 625 A (SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B. V.) 7 September 1994 (1994-09-07) page 1, line 1 -page 4, line 18 ---	1-13
A	US 3 725 531 A (PEARSON ET AL) 3 April 1973 (1973-04-03) column 1, line 32 -column 1, line 51 ---	1
A	GB 2 103 645 A (SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B. V.) 23 February 1983 (1983-02-23) cited in the application page 1, line 106 -page 2, line 20 ---	1,8
A	US 4 145 192 A (BEISE ET AL) 20 March 1979 (1979-03-20) column 1, line 28 -column 1, line 41 ---	1
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

21 April 2004

Date of mailing of the international search report

28/04/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Faria, C

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/50908

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 826 811 A (HAKKA) 30 July 1974 (1974-07-30) column 4, line 21 -column 4, line 28 -----	1-4
A	US 4 957 715 A (GROVER ET AL) 18 September 1990 (1990-09-18) column 3, line 1 -column 12, line 40 -----	1-4, 11

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/50908

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2275625	A	07-09-1994	NONE	
US 3725531	A	03-04-1973	AT 315205 B AU 463531 B2 AU 3919472 A BE 779632 A1 CA 939118 A1 CA 964843 A1 CH 587783 A5 DE 2208102 A1 ES 400063 A1 FR 2126257 A5 FR 2126295 A5 GB 1376201 A IT 948632 B JP 51037631 B NL 7202334 A ,B, NO 130978 B SE 382966 B SU 860679 A1 US 3790660 A ZA 7200045 A	10-05-1974 14-07-1975 23-08-1973 21-08-1972 01-01-1974 25-03-1975 13-05-1977 25-01-1973 16-12-1974 06-10-1972 06-10-1972 04-12-1974 11-06-1973 16-10-1976 24-08-1972 09-12-1974 23-02-1976 30-08-1981 05-02-1974 27-09-1972
GB 2103645	A	23-02-1983	AU 546704 B2 AU 8484982 A BE 893386 A2 BR 8203471 A CA 1205276 A1 DD 202129 A5 DE 3222281 A1 DK 266382 A ,B, ES 8303935 A1 FR 2507498 A1 IN 156408 A1 IT 1210895 B JP 1594115 C JP 2021286 B JP 57209626 A MY 65085 A NL 8202061 A ,B, NO 821968 A ,B, NZ 200951 A PL 236913 A1 SU 1577685 A3 ZA 8204163 A	12-09-1985 23-12-1982 02-12-1982 07-06-1983 03-06-1986 31-08-1983 30-12-1982 16-12-1982 16-05-1983 17-12-1982 20-07-1985 29-09-1989 14-12-1990 14-05-1990 23-12-1982 31-12-1985 03-01-1983 16-12-1982 28-02-1985 14-02-1983 07-07-1990 27-04-1983
US 4145192	A	20-03-1979	DD 124056 A1 DE 2703929 A1 FR 2341643 A1 GB 1528724 A HU 179941 B NL 7701871 A SU 722558 A1	02-02-1977 25-08-1977 16-09-1977 18-10-1978 28-01-1983 25-08-1977 25-03-1980
US 3826811	A	30-07-1974	NONE	
US 4957715	A	18-09-1990	NONE	